

shp Jan 15

Work Order ID 95263

\*95263\*

Page 1

January-07-13 10:28:07 AM

Item ID: D412-698-041

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Hinge Panel Automatic Door Opener, LH (Standard)

Start Date: 1/07/13 Start Qty: 3.00 \*3\*

Cust Item ID:

Required Date: 1/15/13 Req'd Qty: 3.00 \*3\*

Customer:

Reference:

Approvals: Process Plan: *[Signature]* Date: *13-01-15*

Tooling: Date:

Run Start \*NR1\*

QC: Date:

SPC (Y/N): Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
DSI 9548	B								
100		0.00							
*100*	DOCUMENT CONTROL								
DC	Memo	0.00							
Document Control	Photocopy bluefile & type labels per PPPD412-698-041 CHG001								
110	Pick Kit	0.00							
*110*									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
*120*									
QC	Memo	0.00							
Quality Control									

MLJ 13-01-09

DAS 06 9-89

13-01-09 JB

DAS 15 2-89

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other
--	---	---	--	---

**Work Order ID 95263****\*95263\***

Page 2

January-07-13 10:28:07 AM

Item ID: D412-698-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Hinge Panel Automatic Door Opener, LH (Standard)  
Start Date: 1/07/13 Start Qty: 3.00 **\*3\*** Cust Item ID:  
Required Date: 1/15/13 Req'd Qty: 3.00 **\*3\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Pick Kit	0.00							
<b>*130*</b>									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D412-698-041								
	Location: _____								
	PPP rev: _____								
140	QC21- Final Inspection - Work Order Release	0.00							
<b>*140*</b>									
QC	Memo	0.00							
Quality Control									

MLG 13-01-15

MF 13-1-15

DAS 06 9-88

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>						Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>																								
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>																								
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>																								
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																									
<b>Root Cause</b>	<b>Date</b>	<b>Step</b>	<b>Qty</b>	<b>Description of work order update or Non-conformance</b>	<b>Initial Chief Eng</b>	<b>Action Description</b>	<b>Sign &amp; Date</b>	<b>Verification</b>	<b>QC Inspector</b>																		
Doc/Data <input type="checkbox"/>																											
Equip/Tooling <input type="checkbox"/>																											
Operator <input type="checkbox"/>																											
Material <input type="checkbox"/>																											
Setup <input type="checkbox"/>																											
Other <input type="checkbox"/>																											
Process <input type="checkbox"/>																											
Supplier <input type="checkbox"/>																											
Training <input type="checkbox"/>																											
Unapproved <input type="checkbox"/>																											

FAULT CATEGORY			
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other

# Picklist Print

January-07-13 10:28:07 AM

Page 1

Work Order ID: 95263

Parent Item: D412-698-041

Parent Item Name: Hinge Panel Automatic Door Opener, LH (Standard)

Start Date: 1/07/13

Required Date: 1/15/13

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP REV:A 11.08.18 new issue DD verf:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3552-21 Door Prop		Manufactured	No			110	Each	7.0000	0	3	✓ go		SP
	Sms 3x												
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST261		7							
				73948		2							
				85221		5							
D3622-1 Ball Stud		Manufactured	No			110	Each	7.0000	0	3	✓ go		SP
	Sms 3x												
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST060		7							
				87648		7							
D4330-041 Airframe Bracket Assembly, LH		Manufactured	No			110	Each	0.0000	0				SP
	Sms 3x												
D4330-3 Door Bracket		Manufactured	No			110	Each	0.0000	0				SP
	Sms 3x												
MS21042L5 Nut		Purchased	No			110	Each	1,426.0000	0	3	✓ go	13-01-09	SP
	Sms 3x												
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST314		726							
				108827		4							
				116105		1							
				116548		43							
				119109		20							
				121652		16							
				122452		630							
				2937		12							
				ST506		700							
				123900		700							

1x 73948  
2x 85221

87648

3 3952105 SP

3 95267

122452

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other
--	---	---	--	---

# Picklist Print

January-07-13 10:28:07 AM

Page 2

Work Order ID: 95263

Parent Item: D412-698-041

Parent Item Name: Hinge Panel Automatic Door Opener, LH (Standard)

Start Date: 1/07/13

Required Date: 1/15/13

Start Qty: 3.00

Required Qty: 3.00

NAS1149D0563J

Washer

Purchased

No

110

Each

3,967.0000

3

13-01-09

## Location

## Loc Qty

## Loc Code

ST294

967

123248

700

123355

267

ST298

3000

122452

3000

SMO 37

123355



NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

### FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other



# DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS  
IIN-D412-698 REV. E OR LATER APPROVED REVISION

REF. TCCA STC: SH92-43  
REF. FAA STC: SR01446NY  
REF. EASA STC: EASA.IM.R.S.00709  
REF. BRASIL STC: 2010S10-09

## 1.0 PURPOSE:

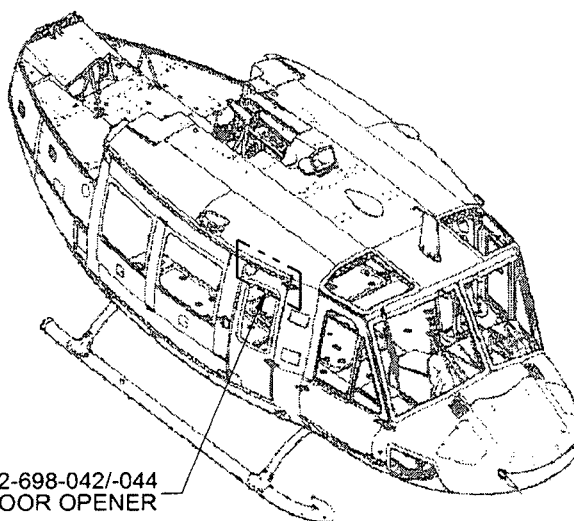
The purpose of this DSI is to add the optional automatic door opener kit for both the OEM aluminum (Bell P/N 205-031-423-005/-157/-006/-158), OEM composite (Bell P/N 412-030-029-101/-102), and Dart Spacedoor™ (Dart P/N D412-694-03/-04) hinge panel doors.

## 2.0 DESCRIPTION:

The Dart D412-698-XXX Hinge Panel Automatic Door Opener Kit permits the installation of a gas spring between the hinge panel doors (or "quarter" doors) and the cabin ceiling to prevent the doors from closing while the occupants enter or exit the aircraft.

The **D412-698-041 Hinge Panel Automatic Door Opener Kit** installs on the LH side of the aircraft and the **D412-698-042 Hinge Panel Automatic Door Opener Kit** installs on the RH side of the aircraft. These kits are designed to mount onto the OEM aluminum door (Bell P/N 205-031-423-005/-157/-006/-158).

The **D412-698-043 Hinge Panel Automatic Door Opener Kit** installs on the LH side of the aircraft and the **D412-698-044 Hinge Panel Automatic Door Opener Kit** installs on the RH side of the aircraft. These kits are designed to mount onto the OEM composite (Bell P/N 412-030-029-101/-102) and Dart Spacedoor™ (Dart P/N D412-694-03/-04).



LOCATION OF D412-698-042/-044  
AUTOMATIC DOOR OPENER

**FIGURE 1: LOCATION OF HINGE PANEL AUTOMATIC DOOR OPENER KITS**  
(RH Installation Shown, LH Opposite)

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED  
BY: *[Signature]*  
D. SHEPHERD (DE # 02)

DATE: 12.08.30  
CERT. NO.: SH92-43  
ISSUE NO.: 5

C	D412-698-043/-044 NOW COMPATIBLE FOR INSTALLATION ON OEM COMPOSITE DOORS	MB	12.08.29
B	ADDED NOTE TO TRIM EXISTING TRIM/CEILING PANELS: ITEMS 11/12 OF SECTIONS 3.0/4.0 (SHT 2/4); UPDATED FIGURE 3 ACCORDINGLY. REF: PAR11-150.	MB	12.01.17
A	NEW ISSUE	DC	11.04.26
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>DCI</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>B</i>		
CHECKED	A.P.	DRAWING NO.	REV. C
MFG. APPR.	N/A	DSI 9548	SHEET 1 OF 9
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	HINGE DOOR OPENER KIT	NTS
DATE	12.08.29	COPYRIGHT © 2011 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

### 3.0 INSTALLATION OF D412-698-041/-042 HINGE PANEL AUTOMATIC DOOR OPENER (OEM ALUMINUM DOOR):

**NOTE:** The following instructions are for a typical RH side installation. For installation on the LH side, substitute D4330-041 for D4330-042.

1. Remove any ceiling or trim panels located on the RH forward cabin ceiling. Remove existing door spring Bell p/n 205-030-303-101 and associated hardware.
2. Using Figures 2 and 3 and dimensions shown as reference, locate D4330-042 Airframe Bracket Assembly, RH on the intersection of the existing aircraft rivet lines. The angled part of D4330-042 Airframe Bracket Assembly, RH is required to pick up on a minimum of 3 rivets. The bracket may be hand formed as necessary to improve fit with the contoured ceiling.
3. Mark the location of D4330-3 Door Bracket on the Hinge Panel Door as shown in Figure 4.
4. Verify that the D3552-21 Gas Spring will close properly (0.25" travel before it is fully retracted) when the door is closed. Adjust the position of the D4330-042 Airframe Bracket Assembly, RH if required to maintain rivet edge distance.
5. Verify that the D3552-21 Gas Spring will open the door to the desired position. Ensure the Gas Spring does not interfere with the door or airframe. Adjust location of D4330-3 Door Bracket if required.  
**NOTE:** When the door is fully open, it should be approximately perpendicular to the aircraft.
6. Remove the 205-031-423-005/-157/-006/-158 aluminum door from the aircraft per the Aircraft Maintenance Manual.
7. Remove any existing rivets where the D4330-042 Airframe Bracket Assembly, RH and D4330-3 Door Bracket will be installed.
8. Locate D4330-042 Airframe Bracket Assembly, RH on the aircraft ceiling per Figure 3. Transfer drill #30 ( $\phi 0.129$ ") holes from the ceiling to D4330-042. Deburr holes.
9. Locate D4330-3 Door Bracket on the hinge panel door per Figure 4. Using Figure 5 as a guide for the approximate locations of the mounting holes, transfer drill 3x #30 ( $\phi 0.129$ ") holes from the door skin to D4330-3 and drill 2x additional holes at locations shown in Figure 5. Deburr holes.
10. Apply a thin layer of Proseal 890 (or equivalent) to faying surface of the D4330-042/-3 brackets. Install the D4330-042 Airframe Bracket Assembly, RH using CR3213-4 rivets as shown in Figure 3. Install D4330-3 Door Bracket using CR3213-4 rivets as shown in Figure 4.
11. Pre-install the ceiling or trim panels that were removed in Step 1 and transfer mark contour of D4330-041 or -042 as shown in Figure 3 (SHT 6). Remove ceiling or trim panels and perform cutout to clear D4330-041 or -042. Touch-up finish of ceiling or trim panels cutout area in accordance with aircraft maintenance manual and re-install any ceiling or trim panels.
12. Install a D3622-1 Ball Stud on the D4330-3 Door Bracket using hardware specified in Figure 4.
13. Re-install modified door on aircraft per Aircraft Maintenance Manual.
14. Install D3552-21 Gas Spring onto the D3622-1 Ball Studs per Figure 2.
15. Verify proper gas spring and door operation.

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY: [Signature]  
D. SHEPHERD (DE # 02)

DATE: 12.08.30  
CERT. NO.: SH92-43  
ISSUE NO.: 5

DESIGN	<u>DP</u>	<b>DART AEROSPACE LTD</b>	
DRAWN	<u>B</u>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. C
MFG. APPR.	N/A	DSI 9548	SHEET 2 OF 9
APPROVED	<u>[Signature]</u>	TITLE	SCALE
DE APPR.	<u>[Signature]</u>	HINGE DOOR OPENER KIT	NTS
DATE	12.08.29	COPYRIGHT © 2011 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

95263

#### 4.0 INSTALLATION OF D412-698-043/-044 HINGE PANEL AUTOMATIC DOOR OPENER (OEM COMPOSITE):

**NOTE:** The following instructions are for a typical RH side installation. For installation on the LH side, substitute D4330-041 for D4330-042.



1. Remove any ceiling or trim panels located on the RH foward cabin ceiling. Remove existing door spring Bell p/n 205-030-303-101 and associated hardware.
2. Using Figures 2 and 3 and dimensions shown as reference, locate D4330-042 Airframe Bracket Assembly, RH on the intersection of the existing aircraft rivet lines. The angled part of D4330-042 Airframe Bracket Assembly, RH is required to pick up on a minimum of 3 rivets. The bracket may be hand formed as necessary to improve fit with the contoured ceiling.
3. Mark the location of D4330-3 Door Bracket on the hinge panel door as shown in Figure 6.
4. Verify that the D3552-21 Gas Spring will close properly (0.25" travel before it is fully retracted) when the door is closed. Adjust the position of the D4330-042 Airframe Bracket Assembly, RH if required to maintain rivet edge distance.
5. Verify that the D3552-21 Gas Spring will open the door to the desired position. Ensure the Gas Spring does not interfere with the door or airframe. Adjust location of D4330-3 Door Bracket if required.  
**NOTE:** When the door is fully open, it should be approximately perpendicular to the aircraft.
6. Remove the 412-030-029-101/-102 composite door from the aircraft per the Aircraft Maintenance Manual.
7. Remove any existing rivets, if any, where the D4330-042 Airframe Bracket Assembly, RH will be installed.
8. Locate D4330-042 Airframe Bracket Assembly, RH on the aircraft ceiling per Figure 3. Transfer drill #30 ( $\phi 0.129$ ") holes from the ceiling to D4330-042. Deburr holes.
9. Locate D4330-3 Door Bracket on the hinge panel door per Figure 6. Using Figure 7 as a guide for the approximate locations of the mounting holes, drill 3x #7 ( $\phi 0.201$ ") holes in D4330-3 and the inner door skin. Enlarge holes in hinge panel door inner skin to 9/16" ( $\phi 0.5625$ ").
10. Install the 3x 80-005-2-8 inserts per Paragraph 3.2.12 of the BHT-MED-SRM at the locations drilled in Step 9 in the hinge panel door using Hysol EA934NA.
11. Apply a thin layer of Proseal 890 (or equivalent) to faying surface of the D4330-042/-3 brackets. Install the D4330-042 Airframe Bracket Assembly, RH using CR3213-4 rivets as shown in Figure 3. Install D4330-3 Door Bracket using hardware as shown in Figure 6.
12. Pre-install the ceiling or trim panels that were removed in Step 1 and transfer mark contour of D4330-041 or -042 as shown in Figure 3 (SHT 6). Remove ceiling or trim panels and perform cutout to clear D4330-041 or -042. Touch-up finish of ceiling or trim panels cutout area in accordance with aircraft maintenance manual and re-install any ceiling or trim panels.
13. Install a D3622-1 Ball Stud on the D4330-3 Door Bracket using hardware specified in Figure 6.
14. Re-install modified door on aircraft per Aircraft Maintenance Manual.
15. Install D3552-21 Gas Spring onto the D3622-1 Ball Studs per Figure 2.
16. Verify proper gas spring and door operation.

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY:   
D. SHEPHERD (DE # 02)

DATE: 12.08.30  
CERT. NO.: SH92-43  
ISSUE NO.: 5

DESIGN	DC	<b>DART AEROSPACE LTD</b>	
DRAWN	B	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. C
MFG. APPR.	N/A	DSI 9548	SHEET 3 OF 9
APPROVED		TITLE	SCALE
DE APPR.		HINGE DOOR OPENER KIT	NTS
DATE 12.08.29		COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

95263

## 5.0 INSTALLATION OF D412-698-043/-044 HINGE PANEL AUTOMATIC DOOR OPENER (DART SPACEDOORS™):

**NOTE:** The following instructions are for a typical RH side installation. For installation on the LH side, substitute D4330-041 for D4330-042.

1. Remove any ceiling or trim panels located on the RH forward cabin ceiling. Remove existing door spring Dart p/n D3113-1 and associated hardware.
2. Using Figures 2 and 3 and dimensions shown as reference, locate D4330-042 Airframe Bracket Assembly, RH on the intersection of the existing aircraft rivet lines. The angled part of D4330-042 Airframe Bracket Assembly, RH is required to pick up on a minimum of 3 rivets. The bracket may be hand formed as necessary to improve fit with the contoured ceiling.
3. Mark the location of D4330-3 Door Bracket on the Spacedoor™ as shown in Figure 6.
4. Verify that the D3552-21 Gas Spring will close properly (0.25" travel before it is fully retracted) when the door is closed. Adjust the position of the D4330-042 Airframe Bracket Assembly, RH if required to maintain rivet edge distance.
5. Verify that the D3552-21 Gas Spring will open the door to the desired position. Ensure the Gas Spring does not interfere with the door or airframe. Adjust location of D4330-3 Door Bracket if required.  
**NOTE:** When the door is fully open, it should be approximately perpendicular to the aircraft.
6. Remove the D412-694-03/-04 Door Assembly from the aircraft per ICA-D412-694 Section 52.1.
7. Remove any existing rivets where the D4330-042 Airframe Bracket Assembly, RH will be installed.
8. Locate D4330-042 Airframe Bracket Assembly, RH on the aircraft ceiling per Figure 3. Transfer drill #30 ( $\varnothing 0.129$ ") holes from the ceiling to D4330-042. Deburr holes.
9. Locate D4330-3 Door Bracket on the Spacedoor™ per Figure 6. Using Figure 7 as a guide for the approximate locations of the mounting holes, drill 3x #7 ( $\varnothing 0.201$ ") holes in D4330-3 and the inner door skin. Enlarge holes in Spacedoor™ inner skin to 9/16" ( $\varnothing 0.5625$ ").
10. Install the 3x 80-005-2-8 inserts per Paragraph 3.2.12 of the BHT-MED-SRM at the locations drilled in Step 9 in the Spacedoor™ using Hysol EA934NA.
11. Apply a thin layer of Proseal 890 (or equivalent) to faying surface of the D4330-042/-3 brackets. Install the D4330-042 Airframe Bracket Assembly, RH using CR3213-4 rivets as shown in Figure 3. Install D4330-3 Door Bracket using hardware as shown in Figure 6.
12. Pre-install the ceiling or trim panels that were removed in Step 1 and transfer mark contour of D4330-041 or -042 as shown in Figure 3 (SHT 6). Remove ceiling or trim panels and perform cutout to clear D4330-041 or -042. Touch-up finish of ceiling or trim panels cutout area in accordance with aircraft maintenance manual and re-install any ceiling or trim panels.
13. Install a D3622-1 Ball Stud on the D4330-3 Door Bracket using hardware specified in Figure 6.
14. Re-install modified door on aircraft per ICA-D412-694 Section 52.2.
15. Install D3552-21 Gas Spring onto the D3622-1 Ball Studs per Figure 2.
16. Verify proper gas spring and door operation.

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

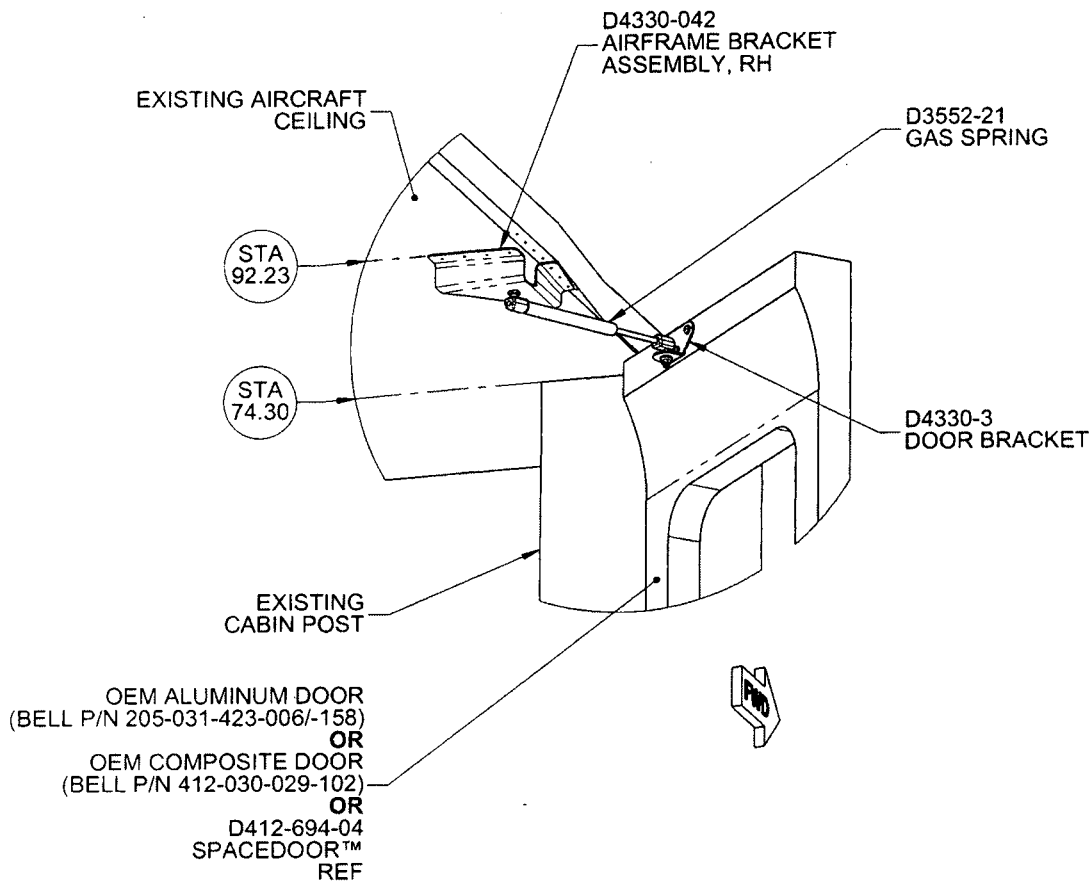
APPROVED

BY: [Signature]  
D. SHEPHERD (DE # 02)

DATE: 12.08.30  
CERT. NO.: SH92-43  
ISSUE NO.: 5

DESIGN	<u>DC</u>	<b>DART AEROSPACE LTD</b>	
DRAWN	<u>B</u>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<u>A.P.</u>	DRAWING NO.	REV. C
MFG. APPR.	<u>N/A</u>	<b>DSI 9548</b>	SHEET 4 OF 9
APPROVED	<u>[Signature]</u>	TITLE	SCALE
DE APPR.	<u>[Signature]</u>	<b>HINGE DOOR OPENER KIT</b>	NTS
DATE	<b>12.08.29</b>	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

95263



**FIGURE 2: INSTALLATION DETAIL**  
(RH Installation Shown, LH Opposite)

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

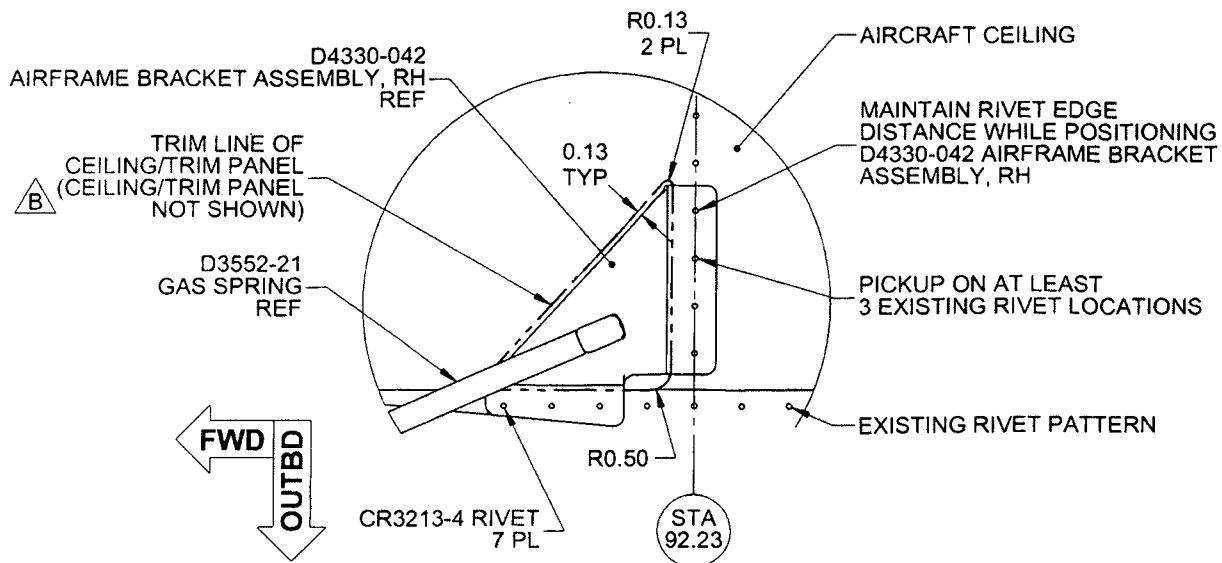
APPROVED

BY: *[Signature]*  
D. SHEPHERD (DE # 02)

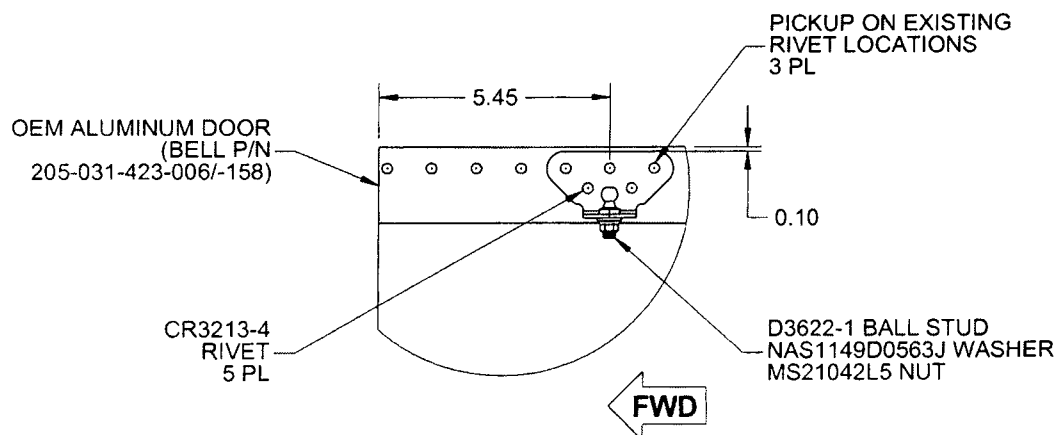
DATE: 12.08.30  
CERT. NO.: SH92-43  
ISSUE NO.: 5

DESIGN	<i>[Signature]</i>	<b>DART AEROSPACE LTD</b>	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. C
MFG. APPR.	N/A	DSI 9548	SHEET 5 OF 9
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	HINGE DOOR OPENER KIT	NTS
DATE: 12.08.29		<small>COPYRIGHT © 2011 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

95263



**FIGURE 3: LOCATION OF D4330-042 AIRFRAME BRACKET ASSEMBLY**  
(RH Shown, LH Opposite)



**FIGURE 4: LOCATION OF D4330-3 DOOR BRACKET**  
**(OEM ALUMINUM DOOR)**  
(RH Shown, LH Opposite)

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

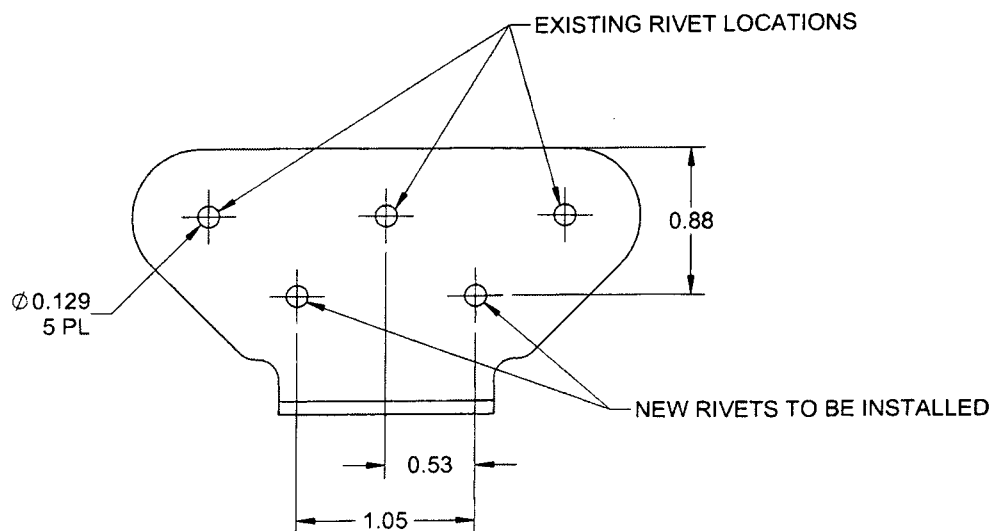
APPROVED

BY: *[Signature]*  
D. SHEPHERD (DE # 02)

DATE: 12.08.30  
CERT. NO.: SH92-43  
ISSUE NO.: 5

DESIGN	<i>[Signature]</i>	<b>DART AEROSPACE LTD</b>	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO. DSI 9548	REV. C
MFG. APPR.	N/A	SHEET 6 OF 9	
APPROVED	<i>[Signature]</i>	TITLE HINGE DOOR OPENER KIT	SCALE NTS
DE APPR.	<i>[Signature]</i>	COPYRIGHT © 2011 BY DART AEROSPACE LTD	
DATE	12.08.29	THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

95263



**FIGURE 5: LOCATION OF D4330-3 DOOR BRACKET MOUNTING HOLES  
(OEM ALUMINUM DOOR)**

(NOTE: MAINTAIN MINIMUM EDGE DISTANCE OF 0.25" FROM HOLE CENTER)

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

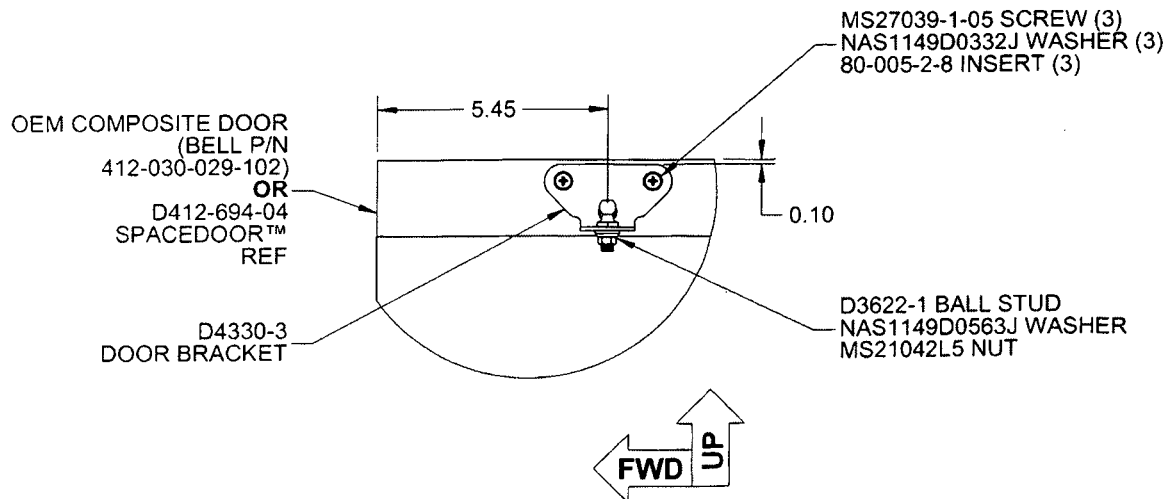
APPROVED

BY: *[Signature]*  
D. SHEPHERD (DE # 02)

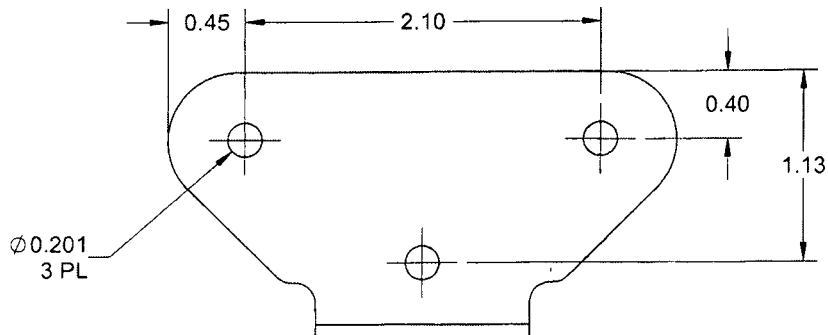
DATE: 12.08.30  
CERT. NO.: SH92-43  
ISSUE NO.: 5

DESIGN	<i>SA</i>	<b>DART AEROSPACE LTD</b>	
DRAWN	<i>B</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. C
MFG. APPR.	N/A	DSI 9548	SHEET 7 OF 9
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	HINGE DOOR OPENER KIT	NTS
DATE	12.08.29	COPYRIGHT © 2011 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

*95263*



**FIGURE 6: LOCATION OF D4330-3 DOOR BRACKET**  
**(OEM COMPOSITE DOOR AND DART SPACEDOOR™)**  
 (RH Shown, LH Opposite)



**FIGURE 7: LOCATION OF D4330-3 DOOR BRACKET MOUNTING HOLES**  
**(OEM COMPOSITE DOOR AND DART SPACEDOOR™)**

CANADA  
 DEPARTMENT OF TRANSPORT  
 AIRCRAFT CERTIFICATION  
 BRANCH  
 DAO # 01-O-01

APPROVED

BY: *[Signature]*  
 D. SHEPHERD (DE # 02)

DATE: 12.08.30  
 CERT. NO.: SH92-43  
 ISSUE NO.: 5

DESIGN	<i>DC</i>	<b>DART AEROSPACE LTD</b>	
DRAWN	<i>B</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. C
MFG. APPR.	N/A	DSI 9548	SHEET 8 OF 9
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	HINGE DOOR OPENER KIT	NTS
DATE	12.08.29	COPYRIGHT © 2011 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

95263



# 5.0 WEIGHT & BALANCE:

INSTALLATION	WEIGHT	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D412-698-041 LH (Aluminum door)	0.23 lb 0.10 kg	-43.63 in -1.11 m	-10.03 in-lb -0.11 m-kG	86.27 in 2.19 m	19.84 in-lb 0.22 m-kG
D412-698-042 RH (Aluminum door)	0.23 lb 0.10 kg	43.63 in 1.11 m	10.03 in-lb 0.11 m-kG	86.27 in 2.19 m	19.84 in-lb 0.22 m-kG
D412-698-043 LH (Composite door)	0.23 lb 0.10 kg	-43.63 in -1.11 m	-10.03 in-lb -0.11 m-kG	86.27 in 2.19 m	19.84 in-lb 0.22 m-kG
D412-698-044 RH (Composite door)	0.23 lb 0.10 kg	43.63 in 1.11 m	10.03 in-lb 0.11 m-kG	86.27 in 2.19 m	19.84 in-lb 0.22 m-kG
D412-698-043 LH (Spacedoor™)	0.23 lb 0.10 kg	-43.63 in -1.11 m	-10.03 in-lb -0.11 m-kG	86.27 in 2.19 m	19.84 in-lb 0.22 m-kG
D412-698-044 RH (Spacedoor™)	0.23 lb 0.10 kg	43.63 in 1.11 m	10.03 in-lb 0.11 m-kG	86.27 in 2.19 m	19.84 in-lb 0.22 m-kG

# 6.0 PARTS LIST:

Qty -041	Qty -042	Qty -043	Qty -044	Part Number	Description
X				D412-698-041	HINGE PANEL AUTOMATIC DOOR OPENER KIT, LH (FOR OEM ALUMINUM DOOR)
	X			D412-698-042	HINGE PANEL AUTOMATIC DOOR OPENER KIT, RH (FOR OEM ALUMINUM DOOR)
		X		D412-698-043	HINGE PANEL AUTOMATIC DOOR OPENER KIT, LH (FOR OEM COMPOSITE DOOR AND DART SPACEDOOR™)
			X	D412-698-044	HINGE PANEL AUTOMATIC DOOR OPENER KIT, RH (FOR OEM COMPOSITE DOOR AND DART SPACEDOOR™)
1	1	1	1	D3552-21	GAS SPRING
1	1	1	1	D3622-1	BALL STUD
1		1		D4330-041	AIRFRAME BRACKET ASSEMBLY, LH
	1		1	D4330-042	AIRFRAME BRACKET ASSEMBLY, RH
1	1	1	1	D4330-3	DOOR BRACKET
		3	3	80-005-2-8	INSERT
1	1	1	1	MS21042L5	NUT
		3	3	MS27039-1-05	SCREW
		3	3	NAS1149D0332J	WASHER
1	1	1	1	NAS1149D0563J	WASHER

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY: D. SHEPHERD (DE # 02)

DATE: 12.08.30  
CERT. NO.: SH92-43  
ISSUE NO.: 5

DESIGN	<u>DP</u>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN	<u>B</u>	
CHECKED	A.P.	DRAWING NO. REV. C
MFG. APPR.	N/A	DSI 9548 SHEET 9 OF 9
APPROVED	<u>[Signature]</u>	TITLE SCALE
DE APPR.		HINGE DOOR OPENER KIT NTS
DATE	12.08.29	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

952296

# REFERENCE ONLY

## 5.0 WEIGHT & BALANCE:

INSTALLATION	WEIGHT	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D412-698-041 LH (Aluminum door)	0.23 lb 0.10 kg	-43.63 in -1.11 m	-10.03 in-lb -0.11 m-kg	86.27 in 2.19 m	19.84 in-lb 0.22 m-kg
D412-698-042 RH (Aluminum door)	0.23 lb 0.10 kg	43.63 in 1.11 m	10.03 in-lb 0.11 m-kg	86.27 in 2.19 m	19.84 in-lb 0.22 m-kg
D412-698-043 LH (Composite door)	0.23 lb 0.10 kg	-43.63 in -1.11 m	-10.03 in-lb -0.11 m-kg	86.27 in 2.19 m	19.84 in-lb 0.22 m-kg
D412-698-044 RH (Composite door)	0.23 lb 0.10 kg	43.63 in 1.11 m	10.03 in-lb 0.11 m-kg	86.27 in 2.19 m	19.84 in-lb 0.22 m-kg
D412-698-043 LH (Spacedoor™)	0.23 lb 0.10 kg	-43.63 in -1.11 m	-10.03 in-lb -0.11 m-kg	86.27 in 2.19 m	19.84 in-lb 0.22 m-kg
D412-698-044 RH (Spacedoor™)	0.23 lb 0.10 kg	43.63 in 1.11 m	10.03 in-lb 0.11 m-kg	86.27 in 2.19 m	19.84 in-lb 0.22 m-kg

## 6.0 PARTS LIST:

Qty -041	Qty -042	Qty -043	Qty -044	Part Number	Description
X				D412-698-041	HINGE PANEL AUTOMATIC DOOR OPENER KIT, LH (FOR OEM ALUMINUM DOOR)
	X			D412-698-042	HINGE PANEL AUTOMATIC DOOR OPENER KIT, RH (FOR OEM ALUMINUM DOOR)
		X		D412-698-043	HINGE PANEL AUTOMATIC DOOR OPENER KIT, LH (FOR OEM COMPOSITE DOOR AND DART SPACEDOOR™)
			X	D412-698-044	HINGE PANEL AUTOMATIC DOOR OPENER KIT, RH (FOR OEM COMPOSITE DOOR AND DART SPACEDOOR™)
1	1	1	1	D3552-21	GAS SPRING
1	1	1	1	D3622-1	BALL STUD
1	1	1	1	D4330-041	AIRFRAME BRACKET ASSEMBLY, LH
1	1	1	1	D4330-042	AIRFRAME BRACKET ASSEMBLY, RH
1	1	1	1	D4330-3	DOOR BRACKET
		3	3	80-005-2-8	INSERT
1	1	1	1	MS21042L5	NUT
		3	3	MS27039-1-05	SCREW
		3	3	NAS1149D0332J	WASHER
1	1	1	1	NAS1149D0563J	WASHER

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY: *[Signature]*  
D. SHEPHERD (DE # 02)

DATE: 12.08.30  
CERT. NO.: SH92-43  
ISSUE NO.: 5

DESIGN	<i>[Signature]</i>	<b>DART AEROSPACE LTD</b>	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. C
MFG. APPR.	N/A	<b>DSI 9548</b>	SHEET 9 OF 9
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	<b>HINGE DOOR OPENER KIT</b>	NTS
DATE	12.08.29	<small>COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	